



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,974	01/07/2004	Emmanuelle Cecile Damay	20320	6438

23556 7590 11/21/2006

KIMBERLY-CLARK WORLDWIDE, INC.  
401 NORTH LAKE STREET  
NEENAH, WI 54956

EXAMINER

HAND, MELANIE JO

ART UNIT	PAPER NUMBER
----------	--------------

3761

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/753,974

Applicant(s)

DAMAY ET AL.

Examiner

Melanie J. Hand

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed September 20, 2006, with respect to the rejection(s) of claim(s) 2, 5, 9-13 and 15-21 under 35 U.S.C. 102 and claims 1, 3, 4, 6-8 and 14 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a newly found prior art reference.

### ***Claim Objections***

Claim 21 is objected to because of the following informalities: the phrase "the hydrophilic hydrophobic microfibers" is unclear. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-13, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fell (U.S. Patent Application Publication No. 2004/0253894) in view of Takai (U.S. Patent No. 6,705,189).

With respect to **Claim 1**: Fell teaches a disposable absorbent liner 10 for use in a crotch portion of underwear comprising a cover layer 12 having a top surface and an opposite bottom surface, and comprising a mixture of hydrophilic microfibers and hydrophobic microfibers located at the top surface. Liner 10 comprises a removable backing layer 42 and a liquid impermeable baffle layer 14 having a top surface and an opposite bottom surface with the baffle layer 14 being

Art Unit: 3761

disposed between the cover layer 12 and the backing layer 42. Fell teaches that the cover layer 12 has a thickness of 0.1-1 mm, the baffle layer 14 has a thickness of 0.1-1 mm and the first and second absorbent layers 24,26 each have a thickness of 0.15-25 mm, resulting in an overall thickness for article 10 of at least 0.5-27 mm, thus satisfying the limitation of a low profile as set forth in the specification. ('894, ¶¶ 0063,0067,0108,0197) Fell teaches an absorbent capacity of 51.4-57.1 grams ('894, Table 2), and therefore does not teach a capacity in the range of about 2 grams to about 10 grams. Applicant has set forth a criticality for optimizing capacity and thickness together, but since applicant has only claimed an article with a low profile, which is defined by a range of thickness values, sufficient criticality has not been established for a specific capacity of 2-10 grams correlated with a thickness of between 0-1 mm (low profile), therefore such thickness and capacity limitations are considered herein to be an optimization of those properties of the article, it would thus be obvious to one of ordinary skill in the art to modify first either the thickness or the capacity of the article of Fell, then the other of the two properties to satisfy the claimed limitations.

Fell does not teach that a larger quantity of hydrophobic microfibers are located at the top surface than are a quantity of hydrophilic microfibers located at the top surface based on a total weight of the mixture of microfibers in the cover layer. Takai teaches a cover sheet that is comprised of a matrix of hydrophilic fibers interwoven with hydrophobic strips 3 that contain 1-30 wt% filler material. Thus the strips contain 60-99 wt% hydrophobic fibers, which would equate to less than 60-99 wt% hydrophobic fibers for the entire cover sheet based upon the weight of the sheet. ('189, Col. 3, lines 39-57). Therefore the remainder of fibers, approximately 1-40 wt% (i.e. a smaller quantity), would be hydrophilic fibers. Takai teaches that the sheet has a comfortable touch and high breathability ('189, Col. 5, lines 8-16), therefore it would be obvious to one of ordinary skill in the art to modify the liner taught by Fell so as to contain the

topsheet taught by Takai to provide a comfortable contact surface for the skin of the wearer, having high breathability as taught by Takai.

With respect to **Claim 2**: Fell teaches a disposable absorbent liner 10 for use in a crotch portion of underwear comprising a cover layer 12 having a top surface and an opposite bottom surface, and comprising a mixture of hydrophilic microfibers and hydrophobic microfibers wherein a larger quantity of hydrophobic microfibers are located at the top surface than are a quantity of hydrophilic microfibers located at the top surface based on a total weight of the mixture of microfibers in the cover layer. Liner 10 comprises a removable backing layer 42 and a liquid impermeable baffle layer 14 having a top surface and an opposite bottom surface with the baffle layer 14 being disposed between the cover layer 12 and the backing layer 42. The absorbent liner 10 has a low profile as defined in the specification ('894, ¶¶ 0063,0067,0108,0197) and an absorbent intake rate of 11-23 seconds ('894, Table 2), or less than about 30 seconds.

Fell does not teach that a larger quantity of hydrophobic microfibers are located at the top surface than are a quantity of hydrophilic microfibers located at the top surface based on a total weight of the mixture of microfibers in the cover layer. Takai teaches a cover sheet that is comprised of a matrix of hydrophilic fibers interwoven with hydrophobic strips 3 that contain 1-30 wt% filler material. Thus the strips contain 60-99 wt% hydrophobic fibers, which would equate to less than 60-99 wt% hydrophobic fibers for the entire cover sheet based upon the weight of the sheet. ('189, Col. 3, lines 39-57). Therefore the remainder of fibers, approximately 1-40 wt% (i.e. a smaller quantity), would be hydrophilic fibers. Takai teaches that the sheet has a comfortable touch and high breathability ('189, Col. 5, lines 8-16), therefore it would be obvious to one of ordinary skill in the art to modify the liner taught by Fell so as to contain the

Art Unit: 3761

topsheet taught by Takai to provide a comfortable contact surface for the skin of the wearer having high breathability as taught by Takai.

With respect to **Claim 3**: Fell teaches a disposable absorbent liner 10 for use in a crotch portion of underwear comprising a cover layer 12 having a top surface and an opposite bottom surface, and comprising a mixture of hydrophilic microfibers and hydrophobic microfibers wherein a larger quantity of hydrophobic microfibers are located at the top surface than are a quantity of hydrophilic microfibers located at the top surface based on a total weight of the mixture of microfibers in the cover layer. Liner 10 comprises a removable backing layer 42 and a liquid impermeable baffle layer 14 having a top surface and an opposite bottom surface with the baffle layer 14 being disposed between the cover layer 12 and the backing layer 42. ('894, ¶¶ 0063,0197) The absorbent liner 10 has a low profile as defined in the specification ('894, ¶¶ 0063,0067,0108,0197) and an absorbent intake rate of 11-23 seconds ('894, Table 2), or less than about 30 seconds.

Fell teaches an absorbent capacity of 51.4-57.1 grams ('894, Table 2), and therefore does not teach a capacity in the range of about 2 grams to about 10 grams. Applicant has set forth a criticality for optimizing capacity and thickness together, but since applicant has only claimed an article with a low profile, which is defined by a range of thickness values, sufficient criticality has not been established for a specific capacity of 2-10 grams correlated with a thickness of between 0-1 mm (low profile), therefore such thickness and capacity limitations are considered herein to be an optimization of those properties of the article, it would thus be obvious to one of ordinary skill in the art to modify first either the thickness or the capacity of the article of Fell, then the other of the two properties to satisfy the claimed limitations.

Fell does not teach that a larger quantity of hydrophobic microfibers are located at the top surface than are a quantity of hydrophilic microfibers located at the top surface based on a total weight of the mixture of microfibers in the cover layer. Takai teaches a cover sheet that is comprised of a matrix of hydrophilic fibers interwoven with hydrophobic strips 3 that contain 1-30 wt% filler material. Thus the strips contain 60-99 wt% hydrophobic fibers, which would equate to less than 60-99 wt% hydrophobic fibers for the entire cover sheet based upon the weight of the sheet. ('189, Col. 3, lines 39-57). Therefore the remainder of fibers, approximately 1-40 wt% (i.e. a smaller quantity), would be hydrophilic fibers. Takai teaches that the sheet has a comfortable touch and high breathability ('189, Col. 5, lines 8-16), therefore it would be obvious to one of ordinary skill in the art to modify the liner taught by Fell so as to contain the topsheet taught by Takai to provide a comfortable contact surface for the skin of the wearer having high breathability as taught by Takai.

With respect to **Claim 4**: The top surface of the baffle layer 14 is secured to the bottom surface of the cover 12. (¶0066)

With respect to **Claim 5**: Backing layer 42 is removably secured to the bottom surface of the baffle layer 14. (¶0197)

With respect to **Claim 6**: The top surface of the baffle layer 14 is secured to the bottom surface of the cover 12 and the backing layer is removably secured to the bottom surface of the baffle layer. (¶¶ 0066,0197)

Art Unit: 3761

With respect to **Claim 7**: Fell teaches an absorbent capacity of 51.4-57.1 grams ('894, Table 2), and therefore does not teach a capacity in the range of about 3 grams to about 9 grams.

Applicant has set forth a criticality for optimizing capacity and thickness together, but since applicant has only claimed an article with a low profile, which is defined by a range of thickness values, sufficient criticality has not been established for a specific capacity of 2-10 grams correlated with a thickness of between 0-1 mm (low profile), therefore such thickness and capacity limitations are considered herein to be an optimization of those properties of the article, it would thus be obvious to one of ordinary skill in the art to modify first either the thickness or the capacity of the article of Fell, then the other of the two properties to satisfy the claimed limitations.

With respect to **Claim 8**: Fell teaches an absorbent capacity of 51.4-57.1 grams ('894, Table 2), and therefore does not teach a capacity in the range of about 4 grams to about 8 grams.

Applicant has set forth a criticality for optimizing capacity and thickness together, but since applicant has only claimed an article with a low profile, which is defined by a range of thickness values, sufficient criticality has not been established for a specific capacity of 2-10 grams correlated with a thickness of between 0-1 mm (low profile), therefore such thickness and capacity limitations are considered herein to be an optimization of those properties of the article, it would thus be obvious to one of ordinary skill in the art to modify first either the thickness or the capacity of the article of Fell, then the other of the two properties to satisfy the claimed limitations.



With respect to **Claim 9**: The absorbent liner 10 has a low profile as defined in the specification and an absorbent intake rate of 11-23 seconds ('894, Table 2), which satisfies the claimed range of less than about 20 seconds.

With respect to **Claim 10**: The absorbent liner 10 has a low profile as defined in the specification and an absorbent intake rate of 11-23 seconds ('894, Table 2), which satisfies the claimed range of less than about 20 seconds.

Fell does not teach an intake rate that is less than about 10 seconds, however applicant has not set forth sufficient criticality for this range of intake rates. Examiner thus considers this range to be an optimization of the intake rate of the claimed article. It would be obvious to one of ordinary skill in the art to modify the article of Fell so as to have an intake rate of less than 10 seconds with a reasonable expectation of success.

With respect to **Claim 11**: Absorbent liner 10 has a density that is at least the density of the absorbent layer 24, or 0.06 – 0.4 g/cc, which is greater than about 0.2 grams per cubic centimeter. (¶0108)

With respect to **Claim 12**: Absorbent liner 10 has a density that is at least the density of the absorbent layer 24, or 0.06 – 0.4 g/cc, which is greater than about 0.225 grams per cubic centimeter. (¶0108)

With respect to **Claim 13**: Absorbent liner 10 has a density that is at least the density of the absorbent layer 24, or 0.06 – 0.4 g/cc, which is greater than about 0.25 grams per cubic centimeter. (¶0108)

With respect to **Claim 15**: Attaching material 40 is provided on at least a portion of the bottom surface of the baffle layer 14. ('894, ¶0108)

With respect to **Claim 16**: Cover layer 12 is a nonwoven integral matrix of the mixture of microfibers. (¶0063)

With respect to **Claim 17**: Fell teaches by reference to U.S. Patent No. 4,604,313 to McFarland et al that the microfibers at the top surface of the cover layer 12 are formed into elongated machine direction (MD) peaks and valleys spaced apart from each other in the cross direction (CD) via embossing of a composite web comprising a base sheet, a pervious top sheet and an absorbent material. ('313, Col. 6, lines 55-59, '894, ¶¶0203,0204)

With respect to **Claim 18**: The peak-to-valley depth of the elongated MD peaks and valleys taught by Fell is 3 mm, or between about 0.1 mm and about 0.5 mm. ('894, ¶¶0203,0204)

With respect to **Claim 19**: The peak-to-valley depth of the elongated MD peaks and valleys taught by Fell is 3 mm, or between about 0.5 mm and about 3 mm. ('894, ¶¶0203,0204)

With respect to **Claim 20**: The peak-to-peak separation of the elongated MD peaks relative to the CD is 2 mm, or between about 0.5 mm and about 3 mm. ('894, ¶¶0203,204)

With respect to **Claim 21**: Fell does not teach a weight percentage for said hydrophilic fibers. Takai teaches a cover sheet that is comprised of a matrix of hydrophilic fibers interwoven with

hydrophobic strips 3 that contain 1-30 wt% filler material. Thus the strips contain 60-99 wt% hydrophobic fibers, which would equate to less than 60-99 wt% hydrophobic fibers for the entire cover sheet based upon the weight of the sheet. ('189, Col. 3, lines 39-57). The hydrophilic fibers could thus comprise greater than 65% and up to 80% of the microfibers based on a total weight of the mixture of microfibers in the cover layer and the hydrophobic microfibers comprise the remainder of the mixture of microfibers in the cover layer. Takai teaches that the sheet has a comfortable touch and high breathability ('189, Col. 5, lines 8-16), therefore it would be obvious to one of ordinary skill in the art to modify the liner taught by Fell so as to contain the topsheet taught by Takai to provide a comfortable contact surface for the skin of the wearer having high breathability as taught by Takai.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fell (U.S. Patent Application Publication No. 2004/0253894) in view of Takai (U.S. Patent No. 6,705,189) as applied to claims 1-13 and 15-21 above, and further in view of Cartwright (U.S. Patent Application Publication No. 2005/0079987).

With respect to **Claim 14**: Absorbent liner 10 has a periphery, however Fell does not teach that liner 10 comprises at least one fold line defining a central area and two side areas, wherein the liner may be adjusted in size by folding the liner along the fold line. Cartwright teaches an absorbent pad that has stripes disposed thereon that define at least fold lines either in the machine or cross-direction as desired, defining a central area and two side areas, and the pad can be adjusted in size by folding along said lines. Cartwright teaches that this folding allows soiled surfaces to be folded away, revealing clean absorbent surfaces and also provides reinforced absorbency to the used surface, therefore it would be obvious to one of ordinary skill

Art Unit: 3761

in the art to dispose folding stripes on the cover layer taught by Fell so as to allow folding to provide reinforced absorbency and customization of the size of said layer by the user for a particular undergarment crotch portion width.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie J Hand  
Examiner  
Art Unit 3761

MJH

TATYANA ZALUKAEVA  
SUPERVISORY PRIMARY EXAMINER

